UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
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Denver, CO 80202-1129
Phone 800-227-8917
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APR 5 - 2017

Ref: 8ENF-AT-TP

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Jim Hjelmstad, Director of Distribution
SpartanNash - Fargo
3030 Main Avenue
Fargo, North Dakota 58103

Re: Notice of Noncompliance (NON) - Clean Air Act (CAA) section 112(r)(1)

Dear Mr. Hjelmstad:

On March 15, 2016, the U.S. Environmental Protection Agency Region 8 inspected SpartanNash - Fargo (SNF), located in Fargo, North Dakota, to evaluate compliance with the General Duty Clause (GDC) requirements of CAA section 112(r)(1) and Emergency Planning and Community Right-To-Know Act (EPCRA) sections 312 and 313. The inspection revealed compliance deficiencies with the facility's implementation of the GDC requirements of CAA section 112(r)(1).

Based on the facts and circumstances surrounding the noncompliance at this facility, the EPA is exercising its discretion and not taking a formal enforcement action for failure to comply with CAA section 112(r)(1). Instead, the EPA is issuing this Notice of Noncompliance (NON) to give SNF an opportunity to immediately resolve the deficiencies. **This office is authorized to issue the NON on a one-time basis only. Non-compliance identified subsequent to the NON being issued will result in penalties being assessed against that facility.**

To resolve this matter, **within 60 days of receipt of this letter**, SNF must submit a signed statement of certification (enclosed) confirming that SNF is in compliance with CAA section 112(r)(1) and that the specific deficiencies identified below have been corrected. If the statement of certification is not submitted in the time specified, SNF may be subject to penalties for failure to comply.

Deficiencies with implementation of CAA section 112(r)(1) – GDC:

Requirement found at CAA section 112(r)(1) Prevention of accidental release – General Duty: The owners and operators of stationary sources producing, processing, handling or storing such substances have a general duty in the same manner and to the same extent as section 654 of Title 29 to identify hazards which may result from such releases using appropriate hazard assessment techniques, to design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur.

1. **SNF failed to address the ammonia process hazards that were identified in the hazard assessment performed on October 3, 2012.**
   - The EPA obtained a copy of a document titled *Fargo ARM PHR Action Items October 2012.* There were 8 action items listed and only 3 of them were marked completed between 9/2/15 and 11/15/15, approximately 3 years after the hazard assessment. During the inspection, Jim Hjelmstad indicated how the remaining 5 action items were being addressed. The action item to secure a hand-held ammonia detector was not done and Mr. Hjelmstad gave a 5/1/16 completion date for the other 4 open action items.
   - After the inspection, the EPA reviewed the Hazard Review Checklist (HRC) in further detail and discovered there were additional identified hazards that were not included in the action items list. A summary of these items are included in the table below and shall be addressed according to SNF's hazard review procedures.
   - SNF used a Hazard Review Checklist developed by IIAR as part of the Ammonia Refrigeration Management (ARM) Program for small refrigeration systems containing less than 10,000 pounds of ammonia. This checklist is based on industry codes, standards and good engineering practices such as ANSI/IIAR Standard 2 and ANSI/ASHRAE Standard 15 and is an appropriate hazard technique for SNF. Section 10.5 of the Hazard Review Procedures state, "All recommendations identified during the hazard review should be addressed as part of the follow-up activities."

Item #	Area	Questions with "No" checked on the HRC	Recommended Action/Comments
2.12	Evaporative Condensers	Are the non-condensable gases (air) purged from the system vented into a container of water?	Vent directly to the sanitary sewer
4.3	Heat Exchangers	Are nameplates with the following information affixed to all heat exchangers and associated pressure vessels . . .?	Not accessible
5.3	Pressure Vessels	Are nameplates with the following information affixed to all pressure vessels . . .?	Not visible on all vessels
5.8		Have all suction lines, low temperature liquid lines, accumulators, surge drums, and similar cold surfaces been insulated to prevent condensation and corrosion?	Insulation in need of repair
5.10		Can the ammonia lines to and from the pressure vessels be quickly isolated from a safe location in an emergency?	Engine room access
5.15		If pressure vessels are equipped with oil pots, do the oil pots have an oil drain valve, an isolation valve connected to the oil drain point, a vent line, a vent line isolation valve, and an approved pressure-relief device?	No pressure relief device
6.4	Ammonia Pumps	Are nameplates with the following information affixed to all pumps . . .?	Not legible
8.13	Ammonia Piping	Have all vessels, equipment, piping mains, headers and branches been labeled to identify the refrigerant (i.e. ammonia), the physical state of the refrigerant (i.e. vapor or liquid), the relative pressure level of the	

		refrigerant and the direction of flow (where applicable).	
9.5	Machinery Room Ventilation System	Is the machinery room provided with an appropriately sized continuously operated, normal (non-emergency) ventilation system?	System turns on based on temperature
10.3	Ammonia Handling and Storage	Is an eyewash and body shower unit located in the immediate vicinity of the unloading or charging operation?	Shower outside engine room in warehouse. Portable eyewash in stairs to engine room. Could be improved.
11.12	General System Safety Issues	Is an eyewash and body shower unit located just outside the machinery room exit door and, in addition, centrally located inside the machinery room?	One shower outside Engine room in warehouse. Eye wash bottle in engine room.
11.13		Are eye-wash and body shower units located near vessels where oil is drained from the system?	Location could be improved.

2. **SNF failed to design and maintain a safe facility, taking such steps as are necessary to prevent releases.**

DESIGN FAILURES:

a. **The Low Temperature Recirculator Vessel does not have a visible nameplate or Form U-1 Manufacturer's Data Report.**
   - *ANSI/IIAR 2-2014 Standard for Safe Design of Closed Circuit Ammonia Refrigeration Systems* Section 5.14.4.1 states, "Equipment shall have a nameplate with minimum data that describes or defines the manufacturer's information and design limits and purpose as specified in Chapter 8 through Chapter 16."
   - *IIAR Bulletin 110 (Revised 6/07) Guidelines for: Start-up, Inspection and Maintenance of Ammonia Mechanical Refrigerating Systems* Section 6.4.4.1 states: "Pressure vessels and shell-and-tube heat exchangers of unknown origin should be replaced."

b. **Exit doors from the machinery room were not equipped with panic hardware.**
   - *ANSI/IIAR 2-2014 Standard for Safe Design of Closed Circuit Ammonia Refrigeration Systems* Section 6.10.2 states, "Machinery room doors shall be self-closing and tight fitting. Doors that are part of the means of egress shall be equipped with panic hardware and shall be side hinged to swing in the direction of egress for occupants leaving the machinery room."

c. **Ammonia piping in the machinery room and piping attached to the high pressure receiver were not labeled.**
   - *ANSI/IIAR 2-2014 Standard for Safe Design of Closed Circuit Ammonia Refrigeration Systems* Section 5.14.5 states, "Ammonia piping mains, headers and branches shall be identified with the following information:
     1. "AMMONIA."
     2. Physical state of the ammonia.

3. Relative pressure level of ammonia, being low or high as applicable.
4. Pipe service, which shall be permitted to be abbreviated.
5. Direction of flow.

The marking system shall either be one established by a recognized model code or standard or one described and documented by the facility owner."

d. **SNF did not document the changes to the refrigeration system that occurred with the installation of the oil still in 2010 were evaluated and that the appropriate updates to the refrigeration system documentation were completed.**
   - SNF has a binder with policies and procedures for documenting system changes based on the IIAR Ammonia Refrigeration Management (ARM) Program. SNF could not provide records showing that the installation of the oil still was evaluated according to their policies and procedures.

MAINTENANCE FAILURES:

a. **Uninsulated piping showed signs of corrosion. Insulated piping showed signs of vapor barrier failure.**
   - *IIAR Bulletin 110 (Revised 6/07) Guidelines for: Start-up, Inspection and Maintenance of Ammonia Mechanical Refrigerating Systems*
     - Section 6.7.1 states, "All uninsulated piping and associated components such as flanges and supports shall be inspected annually for any damage to or deterioration of the piping or its protective finish; take remedial action where necessary. Areas affected by slight corrosion should be cleaned off and appropriately treated before reinstating the protective finish. Deeper pitting or loss of metal, where considered by subjective assessment to be greater than 10% of original wall thickness, should be checked accurately by using techniques such as ultrasonic measurements. If such wall thinning is confirmed, expert advice should be sought, for example from an authorized inspection agency, to determine the need for, and the extent and timing of, any replacements.
     - Section 6.7.2 states, "Any mechanical damage to insulation should be repaired immediately and the vapor seal reinstated to prevent access of water or water vapor which will lead to breakdown of insulation and corrosion of the pipework. At least as part of the annual piping inspection, but preferably more frequently, the external condition of the insulation and supports shall be inspected. Condensation or frosting on the surface of insulated finishes indicates a deterioration or breakdown of the insulation or vapor barrier. Sections of insulation which are obviously in poor condition shall be removed and the integrity of the exposed piping determined with the aid of non-destructive testing techniques, as appropriate. Piping shall be replaced as necessary, and protective coatings, insulation and vapor seal re-applied.

b. **Insulated vessels showed signs of vapor barrier failure. The low temperature recirculator showed signs of external corrosion.**
   - *IIAR Bulletin 110 (Revised 6/07) Guidelines for: Start-up, Inspection and Maintenance of Ammonia Mechanical Refrigerating Systems* Section 6.4.3.1 Pressure Vessels and Shell-and-Tube Heat Exchangers states, "Where a section of insulation is materially damaged, it should be repaired or replaced. Underlying areas affected by

surface corrosion should be cleaned off, inspected and appropriately treated before reinstatement of the protective finish, insulation and vapor barrier. Where the annual inspection reveals that external corrosion has formed pits or caused material loss that reduces the thickness of the vessel or shell-and-tube heat exchanger, then that pressure vessel or shell-and-tube heat exchanger should be dealt with in accordance with Section 6.4.4: Independent Inspection."

c. **SNF did not perform annual tests and inspections on the pressure vessels, ammonia pumps, stop valves, control valves and ventilation system.**
   - SNF has a document titled *Tests and Inspections Used to Maintain the Equipment* (Fargo ARM Program pages 5-3 and 5-4) that specifies the annual tests or inspections that should be performed on the equipment listed above. The EPA requested copies of the annual tests and inspections done in calendar years 2013 – 2015 and SNF did not provide copies for this equipment.

d. **SNF failed to replace the pressure relief valves (PRV) every 5 years. The PRVs were replaced in May 2010 and were in the process of being replaced after this March 16, 2016 inspection.**
   - SNF emailed a copy of an invoice dated 3/23/2016 from Red River Refrigeration to SNF with a hand-written note stating, "We have replaced 20 PRV's in 2016. We will complete the remaining this year."
   - The SNF document *Tests and Inspections Used to Maintain the Equipment* (page 5-4) specifies to renew all relief valves (or cartridges) or bursting discs every five (5) years.
   - *IIAR Bulletin 110 (Revised 6/07)* <u>*Guidelines for: Start-up, Inspection and Maintenance of Ammonia Mechanical Refrigerating Systems*</u> Section 6.6.3 states, "Pressure relief devices shall be replaced or recertified in accordance with one of these three options:
     1) Every five (5) years from the date of installation. IIAR original recommended (in 1978) that pressure relief valves be replaced every five years from the date of installation. This recommendation represents good engineering practice considering the design and performance of pressure relief devices; or
     2) An alternative to the prescriptive replacement interval, i.e., five years, can be developed based on documented in-service relief valve life for specific applications using industry accepted good practices of relief valve evaluation; or
     3) The manufacturer's recommendations on replacement frequency of pressure relief devices shall be followed.

     Exception: Relief devices discharging into another part of the closed-loop refrigeration system are not subject to the relief valve replacement practices."

3. **SNF failed to minimize the consequences of accidental releases which do occur.**

a. **There was no eyewash/safety shower unit inside the machinery room. Inside the machinery room there was only a portable eyewash station located next to the stairs that consists of a squeeze bottle with a limited amount of eyewash (1 quart or 946 mL). Outside the machinery room there was only a safety shower without an eyewash unit.**
   - *ANSI/IIAR 2-2014 Standard for Safe Design of Closed Circuit Ammonia Refrigeration Systems* Section 6.7.1 states, "Each machinery room shall have access

to a minimum of two eyewash/safety shower units, one located inside the machinery room and one located outside of the machinery room, each meeting the requirements in Section 6.7.3. Additional eyewash/safety shower units shall be installed such that the path of travel in the machinery room is no more than 55 ft. to an eyewash/safety shower unit. Section 6.7.3 states, "Emergency eyewash/safety shower unit installations shall comply with ANSI/ISEA Z358.1."

b. **The termination of the pressure relief valve (PRV) discharge piping on the roof was too short and was not directed upward.**
   - *ANSI/IIAR 2-2014 Standard for Safe Design of Closed Circuit Ammonia Refrigeration Systems* Section 15.5.1.3 states, "The discharge termination from pressure relief devices relieving to atmosphere shall not be less than 7.25 ft. (2.2 m) above a roof that is occupied solely during service and inspection. Where a higher adjacent roof level is within 20 ft. (6.1 m) horizontal distance from the relief discharge, the discharge termination shall not be less than 7.25 ft. (2.2 m) above the height of the higher adjacent roof. Section 15.5.1.5 states, "The termination of the discharge shall be directed upward and arranged to avoid spraying ammonia on persons in the vicinity."

c. **SNF failed to ensure employees received refresher ammonia awareness and emergency response training.**
   - SNF provides this refresher training every two years. The EPA checked the training records for two maintenance employees, Bob Mullins and Mick Sell. Bob did not receive the refresher training in 2016 and Mick did not receive training in 2014.
   - SNF should improve the training policy and procedures to ensure all employees receive refresher training.

The enclosed Statement of Certification shall be signed and mailed to the address below within 60 days of receipt of this letter:

Janis Robinson, SEE Inspector
U.S. Environmental Protection Agency Region 8
1595 Wynkoop Street (8ENF-AT-TP)
Denver, Colorado 80202

If you have questions related to this correspondence, the inspection findings or need any clarification regarding compliance issues, please contact Janis Robinson at 303-312-6149 or robinson.janis@epa.gov.

Sincerely,

David Cobb, Unit Chief
Toxics Enforcement Program
Office of Enforcement, Compliance, and
Environmental Justice

Enclosure

STATEMENT OF CERTIFICATION

SpartanNash - Fargo

I certify that I am authorized to respond to this Notice of Noncompliance (NON) and, on behalf of SpartanNash - Fargo (SNF), I certify under penalty of perjury that SNF is in compliance with section 112(r)(1) of CAA, and that the deficiencies listed in this NON have been corrected. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

_____

(Name)

_____

(Signature)

_____

(Title)

_____

(Date)